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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,482

07/29/2003

Kazuyuki Kurosawa

03462/LH

9669

1933 7590 10/10/2007  
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EXAMINER

TRAN, NHAN T

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

10/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/630,482	<b>Applicant(s)</b> KUROSAWA, KAZUYUKI	
	<b>Examiner</b> Nhan T. Tran	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 7/29/2003 & 10/31/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 10/31/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Objections*

3. Claim 1 is objected to because of the recitation of "...for sensing as an interrupt signal an initial change in the operation signal to thereby to give an instruction..." in lines 6-9 of this claim. This should be corrected to read as -- **...for sensing, as an interrupt signal, an initial change in the operation signal to thereby to give an instruction....**-. Appropriate correction is required.
4. Claim 8 is also objected to because of the comma (,) in front of the word "when." This comma should be removed. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 & 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto Hitoshi (JP 2002-199288).

Regarding claim 1, Hitoshi discloses a image pickup apparatus (Fig. 1) comprising:

an image pickup element (CCD 16), responsive to a periodically occurring drive timing signal (VD), for picking up an image of an object; a shutter key (SW 51) for producing an operation signal when depressed; a main control unit (CPU 30) for controlling the whole image pickup operation of the image pickup apparatus, for directly receiving the operation signal produced by operating the shutter key, and for sensing as an interrupt signal (see interrupt signal SG when the shutter key is pressed in Fig. 2) an initial change in the operation signal to thereby give an instruction to cause the image pickup element to start to pick up the image of the object; and an image processor (whole circuit in Fig. 1), responsive to the instruction given by the main control unit, for immediately producing a drive timing signal (VD) to cause the image pickup element to start to pick up the image of the object without waiting for an occurrence of a

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periodically occurring drive timing signal (note that the VD is reset immediately after the shutter key is pressed without waiting for periodic timing to occur as shown in Fig. 2), and for processing data on the image of the object picked up by the image pickup element (see Figs. 1 & 2 and paragraphs [0034], [0041]-0047)).

Regarding claim 19, this method claim is also met by the analysis of claim 1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 5, 6, 9, 10 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto Hitoshi (JP 2002-199288) in view of Ueno (US 2002/0037747).

Regarding claim 2, although Hitoshi discloses LCD monitor 21 in Fig. 1, Hitoshi does not teach a sub control unit for sampling a second operation signal, produced by depressing a key switch, at predetermined intervals of time to thereby produce a sampled signal, and for delivering information on the sampled signal to the main control unit.

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However, as taught by Ueno, a digital camera is implemented with an operation unit (70) as a sub control unit including a touch panel for inputting information, wherein an operation signal is produced by sampling a press of user's finger on the touch panel of an operation unit (70) as a key switch. This sampled operation signal is sent to a main control unit (50). See Ueno, Fig. 1 and paragraph [0031]. It should be noted that the touch panel is periodically driven by an inherent drive timing in order to detect and sense an input.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the digital camera in Hitoshi in view of Ueno to include a sub control unit for sampling a second operation signal, produced by depressing a key switch, at predetermined intervals of time to thereby produce a sampled signal, and for delivering information on the sampled signal to the main control unit so that the user would be able to input command to the camera for controlling camera's operation in a convenient manner using an operation unit other than the shutter button.

Regarding claim 3, Hitoshi in view of Ueno as discussed in claim 2 discloses a sub control unit for directly receiving a second operation signal produced by depressing a key switch, for sensing an on state of the received second operation signal, and delivering information on the sensed on state of the second operation signal to the main control unit (see claim 2).

Regarding claim 5, Hitoshi discloses an image pickup apparatus (Fig. 1) comprising:

- an image pickup element (CCD 16) for picking up an image of an object;
- a shutter key (SW 51) for producing an operation signal when depressed;
- a main control unit (CPU 30) for controlling the whole image pickup operation of the image pickup apparatus, for directly receiving the operation signal produced by operating the shutter key, and for sensing an on state of the operation signal (Fig. 2) to thereby give an instruction to cause the image pickup element to start to pick up the image of the object (see Figs. 1 & 2 and paragraphs [0034], [0041]-0047]).

Although Hitoshi discloses LCD monitor 21 in Fig. 1, Hitoshi does not teach a sub control unit for receiving a second operation signal produced by depressing a key switch, for sensing an on state of the second operation signal, and for delivering information on the sensed on state of the second operation signal to the main control unit.

However, as taught by Ueno, a digital camera is implemented with an operation unit (70) as a sub control unit including a touch panel for inputting information, wherein an operation signal is produced by sampling a press of user's finger on the touch panel of an operation unit (70) as a key switch. This sampled operation signal is sent to a main control unit (50). See Ueno, Fig. 1 and paragraph [0031]. It should be noted that the touch panel is periodically driven by an inherent drive timing in order to detect and sense an input.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the digital camera in Hitoshi in view of Ueno to include a sub control unit for receiving a second operation signal produced by depressing a key switch, for sensing an on state of the second operation signal, and for delivering information on the sensed on state of the second operation signal to the main control unit so that the user would be able to input command to the camera for controlling camera's operation in a convenient manner using an operation unit other than the shutter button.

Regarding claim 6, this claim is also met by the analysis of claim 1.

Regarding claim 9, this claim is also met by the analysis of claim 2.

Regarding claim 10, this claim is also met by the analysis of claim 1.

Regarding claim 20, this claim is also met by the analysis of claim 5.

7. Claims 4, 11, 14, 15, 18, 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto Hitoshi (JP 2002-199288) in view of Iijima Tatsuya (JP 2002-101331).

Regarding claim 4, Hitoshi is silent as to the main control unit determines that the shutter key is released when an off state of the operation signal was sensed



successively a predetermined number of times by sampling the operation signal at predetermined intervals of time.

It is well recognized by Tatsuya that an on state and off state of a shutter key are detected by a controller by sensing an operation signal successively a predetermined number of times at predetermined intervals of time so as to stop the capturing of a still image or to switch to a continuous shooting mode from a still mode, thereby allowing the user to switch from still image mode to continuous mode quickly without troublesome operations utilizing the shutter key (see Tatsuya, abstract, Fig. 4 and paragraph [0027]).

Therefore, it would have been obvious to one of ordinary skill in the art to combine teachings of Hitoshi and Tatsuya to determine that the shutter key is released when an off state of the operation signal was sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time, thereby allowing the user to switch from still image mode to continuous mode quickly without troublesome operations utilizing the shutter key.

Regarding claims 11, 14, 15, 18, 21 & 22, these claims are also met by the analyses of claims 1 & 4.

8. Claims 7 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto Hitoshi and Ueno as applied to claim 5 and in further view of Iijima Tatsuya (JP 2002-101331).

Regarding claim 8, Hitoshi and Ueno are silent as to the main control unit determines that the shutter key is released when an off state of the operation signal was sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time.

It is well recognized by Tatsuya that an on state and off state of a shutter key are detected by a controller by sensing an operation signal successively a predetermined of times at predetermined intervals of time so as to stop the capturing of a still image or to switch to a continuous shooting mode from a still mode, thereby allowing the user to switch from still image mode to continuous mode quickly without troublesome operations utilizing the shutter key (see Tatsuya, abstract, Fig. 4 and paragraph [0027]).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Tatsuya into the camera apparatus of Hitoshi and Ueno to determine that the shutter key is released when an off state of the operation signal was sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time, thereby allowing the user to switch from still image mode to continuous mode quickly without troublesome operations utilizing the shutter key.

Regarding claim 7, this claim is also met by the analysis of claim 8, wherein the on state of the operation signal is also sampled at predetermined intervals of time.

9. Claims 12, 13, 16 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto Hitoshi and Iijima Tatsuya as applied to claims 11 & 15 and in further view of Ueno (US 2002/0037747).

Regarding claim 12, Hitoshi and Tatsuya do not explicitly disclose a sub control unit for sampling a second operation signal, produced by depressing a key switch, at predetermined intervals of time to thereby produce a sampled signal, and for delivering information on the sampled signal to the main control unit.

However, as taught by Ueno, a digital camera is implemented with an operation unit (70) as a sub control unit including a touch panel for inputting information, wherein an operation signal is produced by sampling a press of user's finger on the touch panel of an operation unit (70) as a key switch. This sampled operation signal is sent to a main control unit (50). See Ueno, Fig. 1 and paragraph [0031]. It should be noted that the touch panel is periodically driven by an inherent drive timing in order to detect and sense an input.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the digital camera in Hitoshi and Tatsuya in view of Ueno to include a sub control unit for receiving a second operation signal produced by depressing a key switch, for sensing an on state of the second operation signal, and for delivering information on the sensed on state of the second operation signal to the main control unit so that the user would be able to input command to the camera for controlling camera's operation in a convenient manner using an operation unit other than the shutter button.

Regarding claims 13, 16 & 17, these claims are also met by the analysis of claim 12.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
NHAN T. TRAN  
Patent Examiner